

RESEARCH AND DEVELOPMENT, NEUCHATEL - QUARTERLY REPORT

DIVISION : RESEARCH

SUBJECT TITLE : ANALYTICAL INVESTIGATIONS

PERIOD COVERED : April - June 1990

WRITTEN BY : Murray-M. (MUM), Lauper-G. (GLA), Moor-Ph. (PHM), Renaud-J.M. (JMR),

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PACKAGING ANALYSIS

Battistoni HL blanks and display carton printed by Rentsch with a high-gloss varnish ex Aarberg were well within solvent tolerances [1] (GLA).

Samples of Lorilleux inks and varnishes, boards and printed blanks, were received for analysis. The varnishes and inks contained some strongly smelling solvents. Panel testing was recommended [2] (GLA/PHM).

A Belmont HL blank ex Ahlström contained a higher amount of 1-methoxy-2-propanol than permitted by PM tolerances. Calibration solutions were sent to Ahlström to improve their application of the PM analytical method [3] (GLA).

The principal component of a high-gloss varnish from Sicpa was identified as dipropylene glycol monopropyl ether [4,5] (GLA/PHM).

New acrylic copolymer and PVA pack glues had a more pronounced odor than current material. Several undesirable substances were identified by GC-MS [6,7] (GLA/PHM).

A sample of Iggesund T board contained 4-cyanocyclohexene and 4-phenylcyclohexene which have been previously found on "off odor" samples [8,9] (GLA/PHM).

Printing trials to introduce new odor standards with Amer Tuppaka produced acceptable HL blanks ex Europack [10,11] (GLA).

Aticarta produced MLB HL blanks for PMG Munich. The samples were within PM tolerances but some had an odor which was traced to a series of aromatic hydrocarbons from a Sicpa varnish. The reason for the odor was discussed with Sicpa [12,13] (GLA/PHM).

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Offset-printed labels from Graphia contained some butoxyethanol. Helio-printed blanks from Field were within tolerance [14,15] (GLA/PHM).

Further samples of Iggesund board again showed large peaks of 4-cyanocyclohexene and 4-phenylcyclohexene. Hexanol peaks were similar to the standard product [16,17] (GLA/PHM).

A sample of MLF HL ex Romero was greatly improved relative to previous production. However, ethoxypropanol and toluene were slightly above tolerances [18,19] (GLA).

Analysis of varnish ingredients supplied by Sicpa showed a number of high odor substances. Reformulation was suggested [20] (GLA/PHM).

MLK labels ex Tilgnam were within tolerances except for slightly high levels of methoxy- and ethoxypropanol [21,22] (GLA).

HL blanks from Romero and Rentsch for PM Spain were analysed. All samples were outside PM tolerances [23,24] (GLA).

### TWINE

A twine used for tobacco bales was shown to be polypropylene [25] (MUM).

### SERVICES FOR OTHER GROUPS

#### Puff by puff smoking

Upon request of Product Development, 10 VOLGA prototypes were analysed for puff by puff DPM, nicotine and CO [26].

#### CF analyses

Cigarettes from Sweden [27] and Denmark [28], sampled between February and April 1990, were analysed for CF. As compared to the last CF survey [29], CF was removed from the brands sold in Denmark and only small amounts(1.5 ppm) were detected on Prince of Blends KS and Prince of Blends Light.

In Sweden, the CF content was decreased in Camel 69/NF from 34 to 10 ppm and removed completely from Dunhill Special Light, John Silver KS, Prince, Right and Salem Light Menthol.

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At the request of Product Development, CF was analysed in Camel Box 84/F, Camel Soft 84/F and Winston Box 84/F from the Swiss market. No CF was detected in May [30] in any brands while 5.5 ppm were detected again in Camel 84/F Soft in June [31].

### Headspace analyses

Upon request of Environmental Research, 14 samples corresponding to ambient air sampling were analysed for HCN by headspace gas chromatography [32].

### REFERENCES

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- [1] Memo from Lauper-G. to Gabler-E., April 6, 1990.
- [2] Memo from Lauper-G. to Lutzig-B., April 23, 1990.
- [3] Memo from Lauper-G. to Gabler-E., April 25, 1990.
- [4] Memo from Gabler-E. to Lauper-G., May 8, 1990.
- [5] Memo from Lauper-G. to Gabler-E., May 15, 1990.
- [6] Memo from Lutzig-B. to Lauper-G., May 7, 1990.
- [7] Memo from Lauper-G. to Lutzig-B., May 14, 1990.
- [8] Memo from Gabler-E. to Lauper-G., May 21, 1990.
- [9] Memo from Lauper-G. to Murray-M., May 21, 1990.
- [10] Memo from Gallimore-P. to Kursteiner-C., May 2, 1990.
- [11] Memo from Lauper-G. to Kursteiner-C., May 23, 1990.
- [12] Memo from Gabler-E. to Lauper-G., May 8, 1990.
- [13] Memo from Lauper-G. to Gabler-E., May 23, 1990.
- [14] Memo from Lutzig-B. to Lauper-G., May 9, 1990.
- [15] Memo from Lauper-G. to Lutzig-B., May 28, 1990.
- [16] Memo from Lutzig-B. to Lauper-G., May 16, 1990.
- [17] Memo from Lauper-G. to Lutzig-B., May 28, 1990.
- [18] Memo from Gabler-E. to Lauper-G., June 5, 1990.
- [19] Memo from Lauper-G. to Gabler-E., June 18, 1990.
- [20] Memo from Lauper-G. to Gabler-E., June 14, 1990.
- [21] Memo from Michaca-M. to Lauper-G., May 30, 1990.
- [22] Memo from Lauper-G. to Michaca-M., June 11, 1990.
- [23] Memo from Gabler-E. to Lauper-G., May 22, 1990.
- [24] Memo from Lauper-G. to Gabler-E., June 11, 1990.
- [25] Memo from Murray-M. to Blom-A., May 5, 1990.
- [26] Memo from Renaud-J.M. to Gawad-A., April 19, 1990
- [27] Memo from Renaud-J.M. to Speck-M., April 25, 1990.
- [28] Memo from Renaud-J.M. to Mäder-D., June 22, 1990.
- [29] Renaud-J.M., Report CF-survey 1989, December 13, 1989.
- [30] Memo from Renaud-J.M. to Giller-C., May 23, 1990.
- [31] Memo from Renaud-J.M. to Giller-C., June 21, 1990.
- [32] Memo from Renaud-J.M. to Gerber-C., April 25, 1990.

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